

## Appendix E: Responses to Comments

Comments were accepted on the *Tungsten Mountain Geothermal Development Project* Environmental Assessment (EA), DOI-BLM-NV-C010-2016-0016-EA, for a 30 day period from December 22, 2015 through January 21, 2016; although comments received in a timely manner after this date were also considered.

Letters to 4 individuals, organizations and agencies were mailed on December 22, 2015. Emails were also sent that day to 5 individuals, organizations and agencies. Notification of the availability of the EA to 95 additional State and Federal offices was made through the Nevada State Clearinghouse on December 22, 2015. The Carson City District (CCD) published a news release on that day as well that was sent to media outlets listed on the Nevada BLM State Office media list.

Coordination with the Fallon Paiute-Shoshone Tribe was initiated in 2011 during the proposal for geothermal exploration activities in the Tungsten Mountain Project Area and with the current proposal in 2015. Face-to-face consultation meetings took place in April 2011, March 2015, April 2015, June 2015, September 2015 and November 2015. Site visits to the project location were also conducted in 2011 and 2015 with the Fallon Paiute-Shoshone Tribe's Cultural Committee Coordinators and the Cultural Committee Chair. Consultation with the tribe is ongoing but to date no traditional cultural properties or sacred sites have been identified within the Project Area. Ongoing consultation could result in new information and additional mitigation measures.

Although not required for an EA by regulation, an agency may respond to substantive and timely comments. Substantive comments: 1) question, with reasonable basis, the accuracy of information in the EIS or EA; 2) question, with reasonable basis, the adequacy of, methodology for, or assumptions used for the environmental analysis; 3) present new information relevant to the analysis; 4) present reasonable alternatives other than those analyzed in the Environmental Impact Statement (EIS) or EA; and/or 4) cause changes or revisions in one or more of the alternatives. No response is necessary for non-substantive comments (BLM, 2008). All comments were reviewed, considered, and then categorized into topics when feasible. Distinct topics and comments are summarized in Table 1.

Comment letters were received from 8 Federal and State government agencies by email. The Federal Government Agencies were the US Environmental Protection Agency (USEPA) and the Navy (Naval Air Station Fallon). State agencies that commented were the Nevada State Land Use Planning Agency, the Nevada State Historic Preservation Office (SHPO), the Nevada Division of Water Resources, the Nevada Department of Wildlife, the Nevada Division of Environmental Protection (NDEP) - Bureau of Safe Drinking Water and the NDEP - Bureau of Air Pollution Control. Changes that were made to the EA as a result of the comment submissions are noted in the response table below.

**Table 1: Response to Comments Received on the *Tungsten Mountain Geothermal Development Project* EA**

#	Commenter	Comment	BLM Response
1	Nevada State Land Use Planning Agency	<p>Please consider the cumulative visual impacts from development activities (<b>temporary and permanent</b>), including proliferation of improper lighting.</p> <p>The following mitigation measures should be required:</p> <p><b><u>Utilize appropriate lighting:</u></b></p> <ul style="list-style-type: none"><li>• Utilize consistent lighting mitigation measures that follow “Dark Sky” lighting practices,</li><li>• Effective lighting should have screens that do not allow the bulb to shine up or out. All proposed lighting shall be located to avoid light pollution onto any adjacent lands as viewed from a distance. All lighting fixtures shall be hooded and shielded, face downward, located within soffits and directed on to the pertinent site only, and away from adjacent parcels or areas.</li><li>• A lighting plan should be submitted indicating the types of lighting and fixtures, the locations of fixtures, lumens of lighting, and the areas illuminated by the lighting plan,</li><li>• Any required FAA lighting should be consolidated and minimized whenever possible.</li></ul>	<p>Mitigation measures regarding facility lighting can be found in Section 3.4.12 (Visual Resources) of the Environmental Assessment (EA).</p>
2	Naval Air Station Fallon, Nevada and Naval Aviation Warfare Development Command (Navy)	<p>The airspace above the project site consists of Restricted Area R-4816N with a floor of 1500 feet, R-4816S with a floor of 500ft and Fallon South 1 and Fallon North 2 Military Operating Areas with a floor of 100ft. Low altitude training aircraft can be expected during both day and night time.</p>	<p>Comment noted.</p>
3	Navy	<p>The Gen-Tie Line (section 2.1.4) presents a potential obstacle to low altitude aircraft. While the proposed action states that structure heights "would be either approximately 55 to 70 feet if a wooden or steel monopole were utilized, or approximately 80 feet", the Navy requests transmission lines in no case be higher than 100 feet in order to maintain adequate</p>	<p>Ormat’s preferred option is to utilize steel monopoles with heights from 80’- 110’ tall. There is an existing transmission line in the area that the Tungsten project would tie into that has poles over 100’ tall..</p>

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		separation from low altitude aircraft.	
4	Navy	<p>-Mitigation measures stated for Visual Resources (para 3.4.12.2.1) address some nighttime lighting effects. Additional light mitigations measures are desired for Night Vision Device (NVD) aircraft operations. NVDs operate by amplifying any additional light sources within their designed wavelength spectrum. The Navy desires minimal lighting to maintain dark skies, both during construction and final operating states; and further requests any lighting be downturned and limiting dispersal, with additional NVD compatible (&lt;625 nanometers) filters/covers. Intelligence collection training by other national assets requires minimal lighting in this region to the max extent possible. The exception for lighting mitigation would be during construction to maintain adequate obstruction lighting to any construction equipment or drilling rigs that project above 40 FT.</p>	Refer to comment response #1.
5	Navy	<p>As stated in Section 3.4.14 Land Use Authorizations and Table 3.18, the Navy maintains rights-of-way for five mobile threat emitter (Electronic Warfare) sites in the vicinity of the proposed action and additionally utilizes the road adjacent to the project site regularly. The Navy requests continued unrestricted access to these rights-of-ways as well as unobstructed line-of-sight between associated microwave antennae. If there will be anticipated obstruction of the sites, direct coordination of dates and times is requested.</p>	<p>There is only one mobile threat emitter ROW adjacent to Alpine road within the project area. Ormat will be provided with a location map to ensure construction and long term operation activities or facilities do not interfere with the navy ROW</p>
6	Navy	<p>-Frequency Spectrum utilization in this area remains an issue as the Navy performs extensive Electronic Warfare training. The expected remote instrumentation and telecommunications equipment as part of the geothermal operation could conflict with Navy operations. ORMAT can expect intermittent loss of radio communications and/or GPS location data from Navy training. The Navy prefers use of fiber-optic lines, as proposed in para 2.1.4.1, while avoiding use of any microwave communications. Mitigations</p>	<p>Wireless operation of project facilities using microwave communications equipment is the only option currently proposed by Ormat. Ormat is currently in contact with the Navy to resolve the potential issues arising from the new facilities. The FCC regulates wireless communications signals and would have jurisdiction if Ormat and the Navy cannot come to an agreement. Wire or fiber communications lines may be necessary if the proposed wireless equipment is not compatible with the</p>

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		available in the case of radio frequency spectrum use by the proponent would be use of dual-band frequencies as well as close coordination with the Navy frequency spectrum manager.	existing Navy operations.
7	Nevada Division of Environmental Protection (NDEP) - Bureau of Air Pollution Control	Our regulations have a provision to prevent fugitive dust from becoming airborne. Additionally, if the area disturbance will be greater than 5 acres, a permit is required.	Prior to construction and surface disturbance, Ormat will acquire all necessary permits from NDEP. Also refer to Section 3.4.1.2.1 of the EA.
8	NDEP – Bureau of Air Pollution Control	Additionally, depending on the need/use of a motive fluid in the geothermal process; the facility may be subject to the Chemical Accident Prevention Program.	Refer to Comment Response #7. Ormat will acquire a Chemical Accident Prevention Program Permit to operate as well as a Class II Air Quality Operating Permit from NDEP.
9	NDEP – Bureau of Air Pollution Control	Ormat already holds several permits both for Air Quality and the Chemical Accident Prevention Program for other facilities. The project below will also most likely need a Class II Air Quality Operating Permit for any stationary sources they construct.	Refer to Comment Responses #7 and 8.
10	NDEP – Bureau of Safe Drinking Water	Please be aware that if the proposed Tungsten Mountain Geothermal Development Project will have 15 or more service connections or serve 25 or more people at least 60 days out of a year, the facility will need to become permitted as a public drinking water system. Providing bottle water to the workforce does not relieve a facility of the requirement of becoming permitted as a public drinking water system.	Ormat does not propose any service connections or serving of drinking water for this Project.
11	Nevada Department of Wildlife (NDOW)	Ensure public access remains available on existing roads (e.g. Stone Canyon).	Existing access routes to Augusta, Stone and Smooth Canyons will remain open to public travel. If placement of wells, well pads, pipelines or fencing will affect access on these routes, Ormat will work with the BLM to provide alternative access routes. Additional text has been added to the EA Supplemental Authority table.
12	NDOW	All potentially harmful liquid should be fenced to preclude access by terrestrial animals. In areas with small terrestrial mammals such as the Tungsten area, utilize fencing with holes smaller than 2 inches (e.g. stucco/chicken wire, safety, etc) is recommended for the bottom two feet while being placed tight to the ground.	Refer to the Environmental Assessment's (EA) Section 2.1.1.1 and Section 2.1.1.1 Adopted Protection Measures. Reserve pits would be constructed in accordance with Best Management Practices (BMPs) identified in the "Surface Operating Standards and Guidelines for Oil and

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		Fences should be placed away from sump edge allowing greater than 6 feet of level surface so wildlife can adequately maneuver over/under/ through fences if the sump is accessed. Fences should be inspected and maintained to preclude wildlife access.	Gas Exploration and Development (The Gold Book)” (Fourth Edition – Revised 2007).
13	NDOW	We recommend using conductor covers and appropriate line spacing as the method for preventing raptor electrocutions. Conductor covers should be used in areas where anti-perch and anti-nesting devices are installed.	Refer to Section 2.1.11 Adopted Protection Measures and Section 3.4.7.2.1 in the EA. Raptor protection would be in compliance with the standards described in the “Suggested Practices for Raptor Protection on Power Lines, The State of the Art in 2006” (APLIC 2006) and “Reducing Avian Collisions with Power Lines” (APLIC 2012).
14	NDOW	We discourage the use of lattice transmission structures to minimize raptor and corvid perching and nesting.	No lattice transmission structures would be used. Ormat is proposing the use of steel monopoles for this project.
15	NDOW	Avoidance dates for construction in close proximity to mine hazards including bat compatible closures is as follows: May 15 - July 30 maternity/summer; November 1 – March 30 for hibernation.	A BBCS has been prepared for this project to address these concerns, refer to Appendix D of the EA.
16	NDOW	During drilling of wells (24 hours) it is recommended to minimize lighting at night when reserve pits are holding water. Lights will attract more bats foraging for the insects drawn to lights and therefore placing them in a situation where they will also be drinking from thermal water, which is potentially harmful.	Refer to comment response #1. Only lighting absolutely necessary to operations would be used during drilling.
17	NDOW	Mitigate impacts to springs, pools, standing water in adits, etc. providing water to wildlife if geothermal production activities affect water resources.	Refer to Section 2.1.11 Adopted Protection Measures and the mitigation measures for Special Status Species and Water Quality.
18	Nevada Division of Water Resources	<p>Proposal supported as written.</p> <p>All waters of the State belong to the public and may be appropriated for beneficial use pursuant to the provisions of Chapters 533 and 534 of the Nevada Revised Statutes (NRS), and not otherwise. Any water used on the described lands should be provided by an established utility or under permit issued by the State Engineer’s Office.</p> <p>Any water, or monitor wells or boreholes located on the project lands are the</p>	Comment Noted. The Project proposes an air-cooled facility that will not consume water for processing. Any water that is used for construction and dust abatement purposes would have a temporary use permit filed with the Nevada Division of Water Resources.

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		<p>responsibility of the owner of the property and must be plugged and abandoned as required in Chapter 534 of the Nevada Administrative Code.</p> <p>Any water used on the described project for construction, dust control, maintenance, water fixtures (sinks, hose bibs, or toilets) should be provided by an established utility or under permit or waiver issued by the State Engineer's Office.</p> <p>Treated effluent is considered water as referred to in NRS Chapter 533, and is subjected to appropriation for beneficial use under procedures described in NRS Chapter 533, and specifically NRS § 533.440. If artesian water is located in any well or borehole it shall be controlled as required in NRS 534.060(3). Any person proposing to construct a dam, reconstruction or alteration of old structures in this state shall, before beginning construction, obtain from the State Engineer a permit to appropriate, store and use the water to be impounded by or diverted by the dam. If the proposed dam is or will be 20 feet or more in height, measured from the downstream toe to the crest of the dam, or is less than 20 feet in height and will impound more than 20 acre-feet of water, must submit to the State Engineer in triplicate plans and specifications thereof for his approval in accordance with Nevada Revised Statue Chapter 535 and Nevada Administrative Code Chapter 535 prior to construction is to begin.</p>	
19	State Historic Preservation Office (SHPO)	<p>As relates to cultural resources/historic preservation matters, the State Historic Preservation Office (SHPO) offers the following observations.</p> <p>The correct legal citation for the National Historic Preservation Act (NHPA), effective 1/6/15 is 54 U.S.C. §300101 et seq. (and Section 106 is located at 54 U.S.C. §306108).</p>	The correct legal citation for NHPA and Sec. 106 of the NHPA has been updated in the EA .
20	SHPO	Section 2.1.11 addresses Adopted Protection Measures (APM), for which the	The referenced language in Section 2.1.11 is intended to summarize the



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		<p>following measures are proposed for cultural resources: "Any areas containing cultural resources of significance would be avoided, or the potential for impacts mitigated in a manner acceptable to the BLM. Ormat employees, contractors, and suppliers would be reminded that all cultural resources are protected and if uncovered shall be left in place and reported to the Ormat representative and/or their supervisor" (p. 23) This is somewhat concerning to the SHPO as the Class III Inventory associated with this project, A Class III Inventory of the Ormat Tungsten Mountain Project, Churchill County, Nevada (CRR3-2685), was withdrawn from SHPO review and subsequently resubmitted as a below-threshold report. Thus, if impacts to cultural resources required "mitigation," it would appear that SHPO consultation under the authority of Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, was warranted as the project did indeed have the 2 potential to affect historic properties. Moreover, if resources will require "mitigation," then a Memorandum of Agreement will need to be negotiated and, by definition, the mitigation strategies and process outlined in the MOA will be "acceptable to" all consulting parties and not simply to the federal land manager.</p>	<p>procedure for addressing inadvertent impacts to known or unknown historic properties. Although historic properties may be identified within any project area and measures taken to avoid historic properties, there remains a possibility of accidental or inadvertent impact. The BLM has clarified the language to emphasize the description of procedure for inadvertent impacts to known or unknown historic properties.</p> <p>The section has been moved to 3.3.1.</p>
21	SHPO	<p>Section 3.4.2 identifies the literature review and Class III cultural resource inventory conducted on ca. 1,192 acres of the "Project Area" (not sure whether this means the direct APE) in Churchill County. As noted above, the Class III inventory was submitted to SHPO as a below-threshold report for integration into the Nevada Cultural Resources Information System (NVCRIS), but no SHPO concurrence on determinations of eligibility was sought. Instead, some of the discussion here notes such things as: "Therefore, Cardno ENTRIX concurs with the previous NRHP recommendations of not eligible for all three of these sites." The SHPO respectfully reminds the BLM that the cultural resources consultants make</p>	<p>The BLM intentionally referred to the 1,192 acres of cultural resource inventory as the "Project Area". The area of potential effect is defined as the area where project elements defined in Ormat's Plan of Utilization will be constructed. The BLM has clarified this distinction in the EA.</p> <p>Additionally the EA has been revised from stating "CardnoENTRIX concurs" to the correct statement that the "BLM has determined" in reference to eligibility in the EA.</p> <p>The BLM chose to not seek eligibility concurrence at this time in part because the historic properties will be avoided.</p>

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		recommendations, but it is the federal land managers who make determinations of eligibility and findings of effect, with which the SHPO is regularly asked to concur. Thus, a statement that a consultant has "concurred" with a determination is a bit confusing and does not accurately reflect the Section 106 process.	
22	SHPO	Section 3.4.2.2.1 contains some language that could also be construed as pre-emptive mitigation--vs. site avoidance, which is what we imagine to be the BLM intent. This is additionally concerning when followed by a statement noting: "If these historic properties cannot be avoided, the BLM would consult to develop and evaluate alternatives or modifications to Ormat's undertaking" (p. 34). Given statements to the effect elsewhere in the document that the BLM consulted with Cardno ENTRIX on the project, it might make sense to specify with whom this consultation would occur. In addition, the SHPO reminds the BLM that such consultation would need to commence at ground level given that there has been no prior consultation on these resources.	The BLM has clarified the referenced language from this section in the EA.
23	SHPO	Section 4.3.1 discusses Cumulative Impacts of the Proposed Action, noting that: "Impacts to the integrity of setting of any subsequently identified National Register listed/eligible sites where integrity of setting is critical to their listing/eligibility could occur from the Proposed Action and the RFFA. Construction activities could increase the likelihood of vandalism of cultural sites" (p. 82). A subsequent statement suggesting that effects to cultural resources can be prevented by prosecuting offences under the Archaeological Resources Protection Act (ARPA) is logically inconsistent. After-the-fact prosecution does not prevent the vandalism that triggered the prosecution. Instead, it is only a potential deterrent to subsequent vandalism.	Due in part to the explanation given above (refer to previous comment response 21), the BLM has removed Section 4.3.1 from the EA.
24	SHPO	The use of the conditional mode (i.e., if) is somewhat less than reassuring in statements such as: "If all sites that are determined eligible for inclusion on the	Refer to comment response #23.



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		NRHP are avoided, and sites whose NRHP status is unevaluated are also avoided, then the project would have no effect to historic properties and the cumulative effect would be negligible" (p. 82). As this appears to be the very logic by which the undertaking was determined to be a below threshold undertaking--in other words because the action does not have the potential to affect historic properties--might it not make more sense to frame this in a more declarative fashion and explicitly state in the EA that this is why SHPO consultation was not necessary, per the BLM Protocol?	
25	SHPO	Table 6.1 List of Persons, Agencies and Organizations Consulted identifies the SHPO as the fifth of five groups or agencies consulted in the course of producing this EA, but then identifies no particular individual or program area--whereas all other entries in the table do. As the literature review and Class III inventory were withdrawn from review and the latter was subsequently resubmitted below-threshold, would it not have been more accurate to have omitted the SHPO from this list?	Table 6.1 has been adjusted to accurately reflect the consultation conducted with SHPO.
26	US Environmental Protection Agency (USEPA)	When the Final EA is released for public review, please send one hard copy and one electronic copy to the address above (mail code: ENF-4-2).	Comment Noted. The Final EA and associated documents will be transmitted both hard copy and electronic to EPA as requested.
27	USEPA	<p><u>Air Quality</u>  <i>Recommendations:</i>  <i>Quantify Emissions</i> - In the Final EA, estimate emissions of criteria pollutants from the proposed Project, including construction, testing, and operation activities, and discuss the timeframe[ s] for release of these emissions over the lifespan of the Project.  <i>Specify Emission Sources</i> - Specify, in the Final EA, the emission sources, by pollutant, from mobile sources, stationary sources, and ground disturbance. Use this source-specific information to identify appropriate mitigation measures and areas in need of the greatest attention.</p>	Refer to comment responses #7 and 8. Appropriate permits will be acquired by Ormat prior to construction activities.
28	USEPA	<p><u>Emergency Planning, Risk Management, and Chemical Accident Prevention</u>  <i>Recommendation:</i></p>	The project would comply with all applicable laws, statutes and regulations including the Clean Air

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		Discuss, in the Final EA, compliance with CAA §112(r), EPCRA §§ 303, 311, & 312 and the Nevada Chemical Accident Prevention Program, as applicable.	Act, the Emergency Planning and Community Right-to-Know Act (EPCRA) and Nevada Chemical Accident Prevention Program (refer to comment responses #7 &8). Also refer to Section 3.4.1 of the EA.
29	USEPA	<p><u>Climate Change Recommendations:</u></p> <p>Estimate, in the Final EA, the GHG emissions associated with the proposal and its alternatives. Example tools for estimating and quantifying GHG emissions can be found on CEQ's NEPA.gov website. In addition, the Final EA should describe measures to reduce GHG emissions associated with the Project and disclose the estimated GHG reductions associated with such measures.</p> <p>Include, in the Final EA's "Affected Environment" section, a summary discussion of climate change and ongoing and reasonably foreseeable climate change impacts relevant to the Project, based on U.S. Global Change Research Program assessments, to assist with identification of potential project impacts that may be exacerbated by climate change and to inform consideration of practicable changes to the proposal to make it more resilient to anticipated climate change.</p> <p>Consider, in the Final EA, climate adaptation measures based on how future climate scenarios could affect the Project area, specifically within sensitive areas.</p> <p><sup>1</sup> USG RP National Climate Assessment, May 2014, <a href="http://nca2014.globalchange.gov/report">http://nca2014.globalchange.gov/report</a></p>	<p>The proposed project is a renewable energy project that does not have any CO2 emissions. A Class II Air Quality operating permit will be obtained from NDEP prior to construction as well.</p>